

**ABSTRACT****Differential readout of a pixel array with elimination of pixel- and column-wise fixed pattern noise**

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The present invention discloses an amplifying circuit, comprising an amplifying element with at least an input terminal and an output terminal. A signal input node is provided, the signal levels of which at at least two moments in time are to be amplified by the amplifying element. At least two connecting lines are provided between the signal input node and the amplifying element, for transferring a signal from the signal input node to the input terminal of the amplifying element. A memory element is located on at least one of the connecting lines, for storing a signal level of the signal input node at a moment in time, and a switching element is disposed on each connecting line, between the memory element and the input terminal of the amplifying element if a memory element is provided on the connecting line, for consecutively connecting signal levels of the signal input node at different moments in time to the same amplifying element. The amplifying circuit has at least one output node, each output node being connected to the output terminal of the same amplifying element.

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